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Substitute for form 1449A/PTO	Application Number	10/040,953
	Filing Date	1/5/02
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	First Named Inventor.	Steven Toig
STATEMENT OF AFFLICANT	Group Art Unit	2825
(use as many sheets as nucessary).	Exammer Name	A. Liu
Sheet 1 7	Attorney Docket Number	SPLX P0024

	•	<u> </u>	47.	U.S	PATENT DOCUMENTS	
Examiner trutals	Cite No	U.S. Patent Docum Number Kind C	DOR"	Date of Publication MM-DD-YYYY	Name of Palentea or Applicant of Cited Document	Pages, Columns, Linus, White Relevant Passages or Rulavant Especia Appear
as	1.1	2001/0009	11	07-19-2001	Nilta et al.	
at	2.	2002/0182 844	A1	12-05-2002	lgarashi et al.	The second secon
al	3.	2003/0005 399	\1	01-02-2003	Igarasni et al.	
W	4.	4,593,363		06-03-1986	Burstein et al.	•.) k
M	5	5,267,176		11-30-1993	Antreich et al.	and the second second
as	6.	5,566,078		10-15-1996	Ding et al.	
as	7.	5,587,923	. :	12-24-1996	,Wang	
12	8	5,618,744		04-08-1997	Suzuki et al.	
al	<u>.9.</u>	5,635,736		06-03-1997	Funaki et al.	
az	10.	5,637,920	-	06-10-1997	Loo	
N	-11.	5.640,327		06-17-1997	Ting	
N	12.	5,663,891		09-02-1997	Bamji et al.	
az	13.	5.757,089		05-26-1998	Ishizuka	
02	14.	5,784,289	. , . ·	07-21-1998	Wang	The state of the s
at	15.	5,798,936		08-25-1998	Cheng	4
of	16.	5,838,583		11-17-1998	Varadarajan et al.	
az	17.	5.889,677		03-30-1999	Yasuda et al.	4. 4. 2. 2. 4. 2. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4.
at	,18.	5,980,093		11-09-1999	Jones et al.	
d	,19.	6,070,108		05-30-2000	Andreev et al.	
11-	20.	6,128,767		10-03-2000	Chapman:	

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Examiner		Date	3/2/1	16
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Substitute for form 1449A/PTO	Application Number	10/040,953
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INFORMATION DISCLOSURE	First Named Inventor	Steven Teig
STATEMENT BY APPLICANT	Group Art Unit	2825
(use as many sheets as necessary)	Examiner Name	A. Liu
Sheet 2 7	Attorney Docket Number	SPLX P0024

<i>h</i>			<u> </u>	U.S.	PATENT DOCUMENTS	
as	21.	6,150,193		.11-21-2000	Glenn	
il	22.	6;209,123	B1	03-27-2001	Maziasz et al.	<u> </u>
N.	23.	6,219,832	81	04-17-2001	Buzbêe	
at	24.	6,226,560	B1	05-01-2001	Hama et al.	
M	25.	6,249,902	B1_	06-19-2001	Igusa et al.	
at	26.	6,253,363	B1	06-26-2001	Gasanov et al.	
it	27.	6,295,634	В١	09-25-2001	Matsumoto	
if	28.	6,307,256	. 1	10-23-2001	Chiang et al	412.00
at	29.	6,316,838	В١	11-13-2001	Ozawa et al.	en san filik
at	30.	6,324,674	82	11-27-2001	Andreev et al.	<u> </u>
at	31.	6.324,675	B1	11-27-2001	Dutta et al.	<u></u>
1	32.	6,327,693	B1 .	12-04-2001	Cheng et al.	Albert Const.
af	33.	6,330,707	B1	12-11-2001	Shinomiya et al.	
27	34.	6,407,434	B1 .	06-18-2002	Rostoker et al.	
af	35.	6,415,422	B1	07-02-2002	Mehrotra et al.	
at	36.	6,442,743	81 ,	08-27-2002	Sarrafzadeh et al.	
i st.	37.	6,448,591	B1	09-10-2002	Juengling	<u> </u>
12	38.	6,473,891	B1	10-29-2002	Shively	
it	39.	6,480,991	B1	11-12-2002	Cho et al.	<u> </u>
az	40.	6,490,713	B2	12-03-2002	Matsumóto	
at	41.	6,519,751	B2	02-11-2003	Sriram et al.	
N	42.	6,543,043	B1	04-01-2003	Wang et al.	
AL	43.	6,546,540	81-	04-08-2003	Igarashi et al.	a imaidinadi

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Substitute for form 1449A/PTO	Application Number	10/040,953
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT	First Named Inventor	Steven Teig
	Group Art Unit	2825
(use as many sheets as necessary)	Examiner Name	A. Liu
Sheet 3 7	Altorney Docket Number	SPLX.P0024

	-			U.S.	PATENT DOCUMENTS	;	
N	44.	6,557,145	B2	04-29-2003	Boyle et al.		
al	45.	6.567,967	B2	05-20-2003	Greidinger et al.		, , , ,

					FOREIGN PATENT DOCUMENT	S		
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11	46.	JP ·	411296560	A	Matsumolo et al.	10-29-1999	with English translation of Abstract;	
az	47	JP	2000 82743	A	lgarashi et àl.	03-21-2000	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	Į,
N	48.	JÞ	H03-173471	А	Tawada el al.	07-26-1991	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	į
4	49.	jέ	H05-243379	A	Masako Kubola	09-21-1993	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	
W	50:	JP	H05-102305	Α	Akihiro Salo	04-23-1993	with Japanesc Patent Office's English translation of Abstract; and with English translation of the	,

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	Substitute for form 1449	A/PTÒ	Application Number	10/040,953
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INI	FORMATION DISC	LOSURE	First Named Inventor	Steven Teig
Si	ATEMENT BY AP	PLICANT	Group Art Unit	2825
	(use as many sheets as no	ecessary)	Examiner Name	A. Liu
Sheel	4	7	. Attorney Docket Number	SPLX.P0024

				1	FOREIGN PATENT DOCUMENTS	S		
	l T			, ·			application.	
at	51.	JР	Н07-86407	A	Shinpei Miura	03-31-1995	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	1
W	52.	JP	H09-162279	Α	Masaaki Yoshida	06-20-1997	with Japanese Patent Office's English translation of Abstract, and with English translation of the application.	

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			Group Art Unit	2825
	(úse as many sheets as n	écessary)	Examiner Name	A. Liu
Sh	eet 5	. 7	Attorney Docket Number	SPLX.P0024

		FOREIGN PATENT DOCUMENTS	
*		NON PATENT LITERATURE DOCUMENTS	
Examiner*	Cite	Include name of the author (in CAPITAL LETTERS), title of the anticle (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where publisher.	Ţ ^{fi}
no	53.	Ahujo, R. et al., Faster Algorithms for the Shortest Path Problem, Journal of the Association for Computing Machinery, vol. 37, No. 2, April 1990, pp. 213-223.	1
N	54.	Brady, L. et al., Channel Routing on a 60° Grid, extended abstract, pp. 956-931.	
W	-55.	Brambilla, A. et al., Statistical Method for the Analysis of Interconnects Delay in Submicrometer Layouts, IEEE, 8/2001, pp. 957-966.	
at	56.	Carothers, K., A Method of Measuring Nets Routability for MCM's General Area Routing Problems, 1999, pp. 186-192	
af	57.	Chen, H. et al., Physical Planning of On-Chip Interconnect Architectures, 2002, IEEE, International Conference, pp. 30-35.	
N	58".	Cheng, K., Steiner Problem in Octilinear Routing Model, a Thesis Submitted for the Degree of Master of Science, National University Singaporé, 1995, pp. 1-122.	
W	59.	Chip Model with Wiring Cost Map, August 1983, IBM Technical Disclosure Bulletin, vol. 25, iss. 3A, pp. 929-933.	
az	60.	Cong, J. et al., Efficient Heuristics for the Minimum Shortest Path Steiner Arbörescence Problem with Applications to VLSI Physical Design. Cadence Design Systems and UCLA Computer Science Department, pp.88-95.	
NZ	61.	Cong, J. et al., Performance-Driven Multi-Layer General Routing for PCB/MCM Designs, UCLA Computer Science Department, 1998, pp. 356-361.	
W	62.	Enbody, R. et al., Near-Optimal n-Layer Channel Routing, 23 rd Design Automation Conference, 1986, pp. 708-714.	
if	63.	Fang, S. et al., Constrained Via Minimization with Practical Considerations for Multi-Layer VLSI/FCB Routing Problems, 28 th ACM/IEEE Design Automation Conference, 1991, pp. 60-65.	_]
of	64.	Hom, I. et al., Estimation of the Number of Routing Layers and Total Wirelength in a PCB Through Wiring Distribution Analysis, 1996, pp. 1-6.	
al	65.	Hong, X. et al., Performance Driven Steiner Tree Algorithms for Global Routing, 30 th ACM/IEEE Design Automation Conference, 1993, pp. 177-181.	_

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	: · ·	FOREIGN PATENT DOCUMENTS	
at	66.	Hu, J. et al., A Timing-Constrained Algorithm for Simultaneous Global Routing of Multiple Nets, IEEE/ACM International Conference on Computer Aided Design. ICCAD – 2000. IEEE/ACM Digost of Technical Papers (CAT. NO.00CH37140), Proceedings of International Conference on Computer Aided Design (ICCAD), San Jose, CA, USA, 5-9 Nov. 2000, pp.99-103.	
al	67.	Kastner, R. et al, Predictable Routing, IEEE/ACM International Conference on Computer Aided Design. ICCAD – 2000. IEEE/ACM Digest of Technical Papers (CAT. NO.00CH37140), Proceedings of International Conference on Computer Aided Design (ICCAD), San Jose, CA, USA, 5-9 Nov. 2000. pp. 330-332.	
1	68	Khoo, K. et al., An Efficient Multilayer MCM Router Based on Four-Via Routing. 30" ACM/IEEE Design Automation Conference, 1993, pp. 590-595.	
at	69.	Lillis, J. et al Table-Lookup Methods for Improved Performance-Driven Routing, 1998, pp. 368-373.	
af	70.	Lipski, W. et al., A Unified Approach to Layout Wirability, Mathimatical Systems Theory, 1987, pp. 189- 203.	<u> </u>
ar	71.	Lodi, E. et al., A Preliminary Study of a Diagonal Channel-Routing Model, Algorithmica, 1989. pp.585- 597.	*.
az	72.	Lodi, E. et al., Lecture Notes in Computer Science, A 4d Channel Router for a Two Layer Diagranal Model, pp. 464-476, July 1988.	
af	73.	Nacierio, N. et al., Via Minimization for Gridless Layouts, 24 th ACM/IEEE Design Automation Conference, 1987, pp. 159-165.	
û	74.	Nam, G. et al. Satisfiability-Based Layout Revisited: Detailed Routing of Complex FPGAs Via Search- Based Boolean SAT, 1999, pp. 167-175	
ûL	75.	Oh, J. et al., Constructing Lower and Upper Bounded Delay Routing Trees Using Linear Programming, 33 rd Design Automation Conference, 1996.	
69	76.	Partitioning Logic on to Graph Structure, IBM Technical Disclosure Bulletin, February 1990, vol. 32, INS. 9A, pp. 469-475.	
11	77:	Phillips, N., Channel Routing by Constraint Logic, Department of Computer Science Southern Illinois University, ACM, 1992.	
W	78.	Takashima, Y. et al, Routability of FPGAs with Extremal Switch-Block Structures, IEICE Trans. Fundamentals, vol. E81-A, No. 5, May 1998, pp. 850-856.	\ \ .

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• •		FOREIGN PATENT DOCUMENTS	
200	79.	Thakur, S. et al., Algorithms for a Switch Module Routing Problem, 1994, pp. 265-270.	
27	80	Theune, D. et al., HERO; Hierarchical EMC-constrained routing, 11/1992, IEEE pp 468-472	
N	81.	Tseng, H., Timing and Crossialk Oriven Area Routing. pp. 378-381.	
W	82.	Wang, D., Novel Routing Schemes for IC Layout, Part I: Two-Layer Channel Routing, 28th ACM/IEEE Automation Conference, 1991, pp. 49-53.	
as	83.	Wang, M. et al., Modeling and Minimization of Routing Congestion, Jan. 2000, IEEE proceedings of ASP-DAC, Asia and South Pacific, pp. 185-190.	
N	84.	Wood, G. et al., FPGA Routing and Routability Estimation Via Boolean Satisliability, Department of Electrical and Computer Engineering Carnegie Mellon University, Pittsburgh, PA, pp. 119-125.	
W	. 85.	Zhang, C.X. et al., Floorplan Design Using a Hierarchical Neutral Learning Algorithm, IEEE, 6/1991, pp. 2060-2063.	·
12	86.	Zhou, H. et al., An Optimal Algorithm for River Routing with Crosstalk Constraints, 1996.	Γ
11	87.	Zhou, H. et al., Global Routing with Crosstalk Constraints, Department of Computer Sciences. University of Texas, 1998, pp. 374-377.	
W	88.	Zhou, H. et al., Optimal River Routing with Crosstalk Constraints, ACM Transactions on Design Automation of Electronic Systems, vol. 3, No. 3, July 1998, pp. 496-514	

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Substitute for form 1449A/PTO	Application Number	10/040.953			· ·
	Fiting Date	1/5/02	<u> </u>		•
INFORMATION DISCLOSURE	First Named Inventor	Steven Teig		-	
STATEMENT BY APPLICANT	Group Ari Unit	2825			
(use as many sheets as necessary)	Examiner Name	Andrea Liu			
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itiais'	Cite	U.S. Patent Documen Number	Date of filing MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Related Application Date
1 9	1.	2003/0079193	12-07-2001	Steven Teig ct al.	Parent application; present application is a continuation of 2003/079193.
af	2.	2003/0018947	12-07-2001	Steven Teig et al.	Application filed on the same day as the pare application 2003/0079193, with the same specification as the present application excell for summary and abstract.
N	3.	2002/0147958	10-19-2001	Steven Teig et al.	Parent application per the preliminary amendment dated 2/19/03.
J	4.	2003/0063614	01-04-2002	Stovon Teig et al.	Application with some of the same parent provisional applications and with the same specification as the present application exceller summary and abstract.
S.	5.	2003/0064559	01-04-2002	Steven Teig et al.	Application with some of the same parent provisional applications and with the same specification as the present application exce for summary and abstract.
»Z	ć.	2003/0063568	01-04-2002	Sleven Teig et äl.	Application with some of the same parent provisional applications and with the same specification as the present application excellent for summary and abstract.
1	7.	2003/0101428 S/N 10/040,915	01-05-2002	Steven Teig et al.	Continuation of 2003/0079193.
5	8.	Preliminary	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0101428 does not accurately reflect the claims of S/N 10/040.915.
11	9.	2002/0166105 S/N 10/040,948	01-05-2002	Steven Toig et al.	Continuation of 2003/0079193
L	10.	Preliminary Amendment S/N 10/040,948	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0166105 does not accurately reflect the claims of S/N 10/040,948.

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Application Number 10/040,953 Substitute for form 1449A/PTO 1/5/02 Filing Date INFORMATION DISCLOSURE First Named Inventor Steven Teig STATEMENT BY APPLICANT Group Art Unit 2825

Examiner Name

Attorney Docket Number

0		RELATED	J.S. PATENT DOCU	MENTS
19 11.	2003/0023943 S/N 10/040 954	01-05-2002	Steven Teig et al.	Continuation of 2003/0079193.
AT 12.	Preliminary Amendment S/N 10/040.954	01-05-2002	Sleven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0023943 does not accurately reflect the claims of S/N 10/040,954.
2/ 13.	2003/0066042 S/N 10/040,963	01-05-2002	Steven Teig et al.	Continuation of 2003/0079193
AJ 14.	Preliminary Amendment S/N 10/040,963	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0066042 does not accurately reflect the claims of S/N 10/040,963.
0 £ 15.	2002/0174412 S/N 10/041,942	01-07-2002	Sleven Teig et al.	Continuation of 2003/0079193.
AZ 16.	Preliminary Amendment S/N 10/041,942	01-07-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0174412 does not accurately reflect the claims of S/N 10/041,942.
aZ 17.	2003/0088844 S/N.10/041,957	01-07-2002	Steven Teig et al.	Continuation of 2003/0079193.
WZ 18.	Preliminary Amendment S/N 10/041.957	01-07-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0086844 does not accurately reflect the claims of S/N 10/041,957.
19.	2002/0199165 S/N 10/046,864	01-13-2002	Steven Teig et al.	Continuation of 2003/0079193.
20.	Preliminary Amendment S/N 10/046,864	01-13-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0199165 does not accurately reliect the claims of S/N 10/046,864.
ad 21.	2003/0066043	01-13-2002	Stoven Teig et al.	Continuation of 2003/0088844 per preliminar amendment.
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RELATED U.S. PATENT DOCUMENTS									
0 / 23.	2003/0056187 S/N 10/047.982	01-14-2002	Steven Teig et al.	Continuation of 2003/0079193.					
AJ 24.	Preliminary Amendment S/N 10/047,982	01-14-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0050187 does not accurately reflect the claims of S/N 10/047 982					
25.	2003/0066044	01-13-2002	Steven Teig et al.	Application with some of the same parent provisional applications and with the same specification as the present application except for summary and abstract.					
af 26.	2003/0066045	01-13-2002	Steven Teig et al.	Application with some of the same parent provisional applications and with the same specification as the present application except for summary and abstract.					
W 27.	2003/0088845 S/N 10/047 978	01-13-2002	Steven Teig et al.	Continuation of the parent application (2003/0079193) of the present application.					
AL 28.	Preliminary Amendment for S/N 10/047,978	01-13-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0088845 does not accurately reflect the claims of S/N 10/047,978.					
at 29.	2002/0133798	12-06-2000	Steven Teig et al.	Application regarding related placement technology					
at 30.	2002/0100007	12-06-2200	Steven Teig et al.	Application regarding related placement technology					
31.	2002/0073390 S/N 09/737,210	12-13-2000	Steven Teig et al.	Application regarding related placement technology					
AZ 32.	Preliminary Amendment S/N 09/737,210	12-13-2000	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0073390 does not accurately reflect the claims of S/N 05/737,210					
/AL 33.	S/N 09/737,220	12-13-2000	Steven Teig et al.	Application regarding related placement technology					
at 34.	S/N 09/737.245	12-13-2000	Steven Teig et al.	Application regarding related placement technology					
al 35.	S/N 09/739,460.	12-15-2000	Steven Teig et al.	Continuation of parent 2002/0100007.					

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INFORMATION DISCLOSURE	First Named Inventor	Steven Teig
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RE	36.	2002/0124231 S/N 09/739,580		12-15-2000	Steven Teig et al.	Continuation of parent 2002/0100007.
as	37.	Preliminary Amendment S/N 09/739,580		12-15-2000	Sieven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0124231 does not accurately reflect the claims of S/N 09/739,580.
at	38.	S/N 09/739,589	1	12-15-2000	Steven Teig et al.	Continuation of parent 2002/0100007.
T	39.	S/N 09/742,171		12-19-2000	Steven Teig et al.	Continuation of parent 2002/0100907.
67	40.	2003/0121015 S/N 09/745,067		12-19-2000	Steven Teig et al.	Continuation of parent 2002/0190907.
ûL	41	Preliminary Amendment S/N 09/745.067		12-19-2000	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0121015 does not accurately reflect the claims of S/N 09/745.067.
W	42.	2002/0069397	-	01-13-2002	Steven Toig et al.	Application regarding related placement technology
Z	43.	2002/0170027		02-20-2002	Steven Teig et al.	Application regarding related placement technology
al	44.	2002/0157075		02-20-2002	Sieven Teig et al.	Application regarding related placement technology
DL.	45.	2003/0088841 S/N 10/329,241		12-23-2002	Steven Teig et al.	Application regarding related placement technology.
of	46.	Preliminary Amendment S/N 10/329,241	., ,	12-23-2002	Steven Teig et at.	This Preliminary Amendment is submitted as the publication 2003/0088641 does not accurately reflect the claims of S/N 10/329,241.

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